

Amendments to the Claims:

Please amend the claims as follows. Amend claims 17, 20, 42 and 44-54 and add new dependent claims 56-58. This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-16 (canceled)

Claim 17 (currently amended): A method for the inhibition of transmission of a hepatitis B virus to a cell, comprising contacting the virus, in the presence of the cell, with an effective concentration of a peptide having the formula:

~~X-PLLVLQAGFFLLTRILTIPQSLDSWWTSNLFGLGGTTVCLGQNSQSP-Z;~~
X-PLLVLQAGFFLLTRILTIPQSLDSWWTSNLFGLGGTTVCLGQNSQSP-Z;
X-PLLVLQAGFFLLTRILTIPQSLDSWWTSNLFGLGGT-Z;
X-LLVLQAGFFLLTRILTIPQSLDSWWTSNLFGLGGTT-Z;
X-LVLQAGFFLLTRILTIPQSLDSWWTSNLFGLGGTTV-Z;
X-LQAGFFLLTRILTIPQSLDSWWTSNLFGLGGTTVCL-Z;
X-QAGFFLLTRILTIPQSLDSWWTSNLFGLGGTTVCLG-Z;
X-AGFFLLTRILTIPQSLDSWWTSNLFGLGGTTVCLGQ-Z;
X-GFFLLTRILTIPQSLDSWWTSNLFGLGGTTVCLGQN-Z;
X-FFLLTRILTIPQSLDSWWTSNLFGLGGTTVCLGQNS-Z;
X-FLLTRILTIPQSLDSWWTSNLFGLGGTTVCLGQNSQ-Z;
X-LLTRILTIPQSLDSWWTSNLFGLGGTTVCLGQNSQS-Z;
~~X-PGYRWMCLRRFIIFLFILLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGCRTCMTT-Z;~~
X-PGYRWMCLRRFIIFLFILLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTCMTT-Z;
X-PGYRWMCLRRFIIFLFILLCLIFLLVLLDYQGML-Z;
X-GYRWMCLRRFIIFLFILLCLIFLLVLLDYQGMLP-Z;
X-YRWMCLRRFIIFLFILLCLIFLLVLLDYQGMLPV-Z;
X-RWMCLRRFIIFLFILLCLIFLLVLLDYQGMLPVC-Z;
X-WMCLRRFIIFLFILLCLIFLLVLLDYQGMLPVCPI-Z;
X-MCLRRFIIFLFILLCLIFLLVLLDYQGMLPVCPLI-Z;
X-CLRRFIIFLFILLCLIFLLVLLDYQGMLPVCPLIP-Z;
X-LRRFIIFLFILLCLIFLLVLLDYQGMLPVCPLIPG-Z;
X-RRFIIFLFILLCLIFLLVLLDYQGMLPVCPLIPGS-Z;
X-RFIIFLFILLCLIFLLVLLDYQGMLPVCPLIPGS-Z;
~~X-FIIFLFILLCLIFLLVLLDYQGMLPVCPLIGSS-Z;~~
X-FIIFLFILLCLIFLLVLLDYQGMLPVCPLIPGSS-Z;

X-IFLLFILLLLCLIFLLVLLDYQGMLPVCPLIPGSST-Z;
~~X-IFLLFILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTS-Z;~~
~~X-FLFILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTST-Z;~~
~~X-LFILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTSTG-Z;~~
~~X-FILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGP-Z;~~
~~X-ILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPC-Z;~~
~~X-LLLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCR-Z;~~
~~X-LLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRT-Z;~~
~~X-LCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTC-Z;~~
~~X-CLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTCMT-Z;~~
~~X-LIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTCMT-Z;~~ or
~~X-IFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTCMTT-Z;~~
X-IFLLFILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTT-Z;
X-FLFILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTTS-Z;
X-LFILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTTST-Z;
X-FILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTG-Z;
X-ILLLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGP-Z;
X-LLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPC-Z;
X-LLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCR-Z;
X-LCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRT-Z;
X-CLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTC-Z;
X-LIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMT-Z; or
X-IFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMT-Z;

(SEQ ID NOS: 239-273, respectively)

in which:

amino acid residues are presented by the single-letter code;

X comprises an amino group, an acetyl group, a 9-fluorenylmethoxy-carbonyl group, a hydrophobic group, or a macromolecule carrier group;

Z comprises a carboxyl group, an amido group, a hydrophobic group, or a macromolecular carrier group for an effective period of time so that ~~ne~~ infection of the cell by the virus ~~occurs~~ is inhibited.

Claims 18-19 (canceled)

Claim 20 (currently amended): The method of Claim 17 wherein the peptide has the formula

X-PLLVLQAGFFLLTRILTIQSLDSWWTSLNFLGGGTTVCLGQNSQSP-Z

~~(SEQ ID NO: 239)~~

X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGONSQSP-Z

(SEQ ID NO: 239).

Claim 21 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGT-Z (SEQ ID NO: 240).

Claim 22 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-LLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTT-Z (SEQ ID NO: 241).

Claim 23 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-LVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTTV-Z (SEQ ID NO: 242).

Claim 24 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-LQAGFFLLTRILTIPQSLDSWWTSLNGLGGTTVCL-Z (SEQ ID NO: 243).

Claims 25-32 (canceled)

Claim 33 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-GYRWMCLRRFIIFLIFILLCLIFLLVLLDYQGMLP-Z (SEQ ID NO: 252).

Claim 34 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-YRWMCLRRFIIFLIFILLCLIFLLVLLDYQGMLPV-Z (SEQ ID NO: 253).

Claim 35 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-RWMCLRRFIIFLFILLCLIFLLVLLDYQGMLPVC-Z (SEQ ID NO: 254).

Claim 36 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-WMCLRRFIIFLFILLCLIFLLVLLDYQGMLPVCP-Z (SEQ ID NO: 255).

Claim 37 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-MCLRRFIIFLFILLCLIFLLVLLDYQGMLPVCPI-Z (SEQ ID NO: 256).

Claim 38 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-CLRRFIIFLFILLCLIFLLVLLDYQGMLPVCPLI-Z (SEQ ID NO: 257).

Claim 39 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-LRRFIIFLFILLCLIFLLVLLDYQGMLPVCPLIP-Z (SEQ ID NO: 258).

Claim 40 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-RRFIIFLFILLCLIFLLVLLDYQGMLPVCPLIPG-Z (SEQ ID NO: 259).

Claim 41 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-RFIIFLFILLCLIFLLVLLDYQGMLPVCPLIPGS-Z (SEQ ID NO: 260).

Claim 42 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-FIIFLFIILLCLIFLLVLLDYQGMLPVCPLIGGSS-Z (SEQ ID NO: 261)~~

X-FIIFLFIILLCLIFLLVLLDYQGMLPVCPLIPGSS-Z (SEQ ID NO: 261).

Claim 43 (previously presented): The method of Claim 17 wherein the peptide has the formula

X-IIFLFIILLCLIFLLVLLDYQGMLPVCPLIPGSST-Z (SEQ ID NO: 262).

Claim 44 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-IFLFIILLCLIFLLVLLDYQGMLPVCPLIPGSSTS-Z (SEQ ID NO: 263)~~

X-IFLFIILLCLIFLLVLLDYQGMLPVCPLIPGSSTT-Z (SEQ ID NO: 263).

Claim 45 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-FLFIILLCLIFLLVLLDYQGMLPVCPLIPGSSTST-Z (SEQ ID NO: 264)~~

X-FLFIILLCLIFLLVLLDYQGMLPVCPLIPGSSTTS-Z (SEQ ID NO: 264).

Claim 46 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-LFIILLCLIFLLVLLDYQGMLPVCPLIPGSSTSTG-Z (SEQ ID NO: 265)~~

X-LFIILLCLIFLLVLLDYQGMLPVCPLIPGSSTTST-Z (SEQ ID NO: 265).

Claim 47 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-FIILLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGP-Z (SEQ ID NO: 266)~~

X-FIILLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTG-Z (SEQ ID NO: 266).

Claim 48 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-ILLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPC-Z (SEQ ID NO: 267)~~

X-ILLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGP-Z (SEQ ID NO: 267).

Claim 49 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-LLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCR-Z (SEQ ID NO: 268)~~

X-LLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPC-Z (SEQ ID NO: 268).

Claim 50 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-LLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRT-Z (SEQ ID NO: 269)~~

X-LLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCR-Z (SEQ ID NO: 269).

Claim 51 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-LCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTC-Z (SEQ ID NO: 270)~~

X-LCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRT-Z (SEQ ID NO: 270).

Claim 52 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-CLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMT-Z (SEQ ID NO: 271)~~

X-CLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTC-Z (SEQ ID NO: 271).

Claim 53 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-LIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMT-Z (SEQ ID NO: 272)~~

X-LIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMT-Z (SEQ ID NO: 272).

Claim 54 (currently amended): The method of Claim 17 wherein the peptide has the formula

~~X-IFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMTT-Z (SEQ ID NO: 273)~~

X-IFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMT-Z (SEQ ID NO: 273).

Claim 55 (previously presented): The method of Claim 17 wherein X is an acetyl group, and Z is an amido group.

Claim 56 (new) The method of Claim 17 wherein the peptide has at least one amino acid substitution, wherein a first amino acid residue is substituted for a second, different amino acid residue.

Claim 57 (new) The method of Claim 56, further wherein the amino acid substitution is a conserved substitution.

Claim 58 (new) The method of Claim 56, further wherein the amino acid substitution is a non-conserved substitution.